

## CLAIMS

1. A thermally sensitive recording medium comprising a thermally sensitive color developing layer containing colorless or pale colored basic leuco dye and a color developing agent as main components on a substrate, wherein said thermally sensitive recording layer is comprising an acrylic polymer obtained by copolymerization of alkyl acrylate, alkyl methacrylate and vinylsilane as monomer components and a colloidal silica.

2. The thermally sensitive recording medium of claim 1, wherein the acrylic polymer further comprises acrylonitrile as a monomer component.

3. The thermally sensitive recording medium of claim 1 or claim 2, wherein the acrylic polymer further comprises styrene as a monomer component.

4. A thermally sensitive recording medium comprising a thermally sensitive color developing layer containing colorless or pale colored basic leuco dye and a color developing agent as main components on a substrate, wherein said thermally sensitive recording layer is comprising an acrylic polymer and a colloidal silica possessing chain structure.

5. The thermally sensitive recording medium of claim 4, wherein the colloidal silica possessing chain structure is consisting of spherical colloidal silica particles of average particle size 10-50nm and metal oxide containing silica which bond said spherical colloidal silica particles, and  $D1/D2$ , which is the ratio of particle size  $D1$  nm measured by dynamic light scattering method and average particle size of spherical colloidal silica  $D2$  nm measured by nitrogen absorbing method, is 3 or more, wherein said  $D1$  is 50-500nm and said spherical colloidal silica particles are linked in one plane like a rosary.

6. A thermally sensitive recording medium comprising a thermally sensitive color developing layer containing colorless or pale colored basic leuco dye and a color developing agent as main components on a substrate,

wherein said thermally sensitive recording layer is comprising an acrylic polymer obtained by copolymerization of alkyl acrylate, alkyl methacrylate and vinylsilane as monomer components and a colloidal silica, wherein said colloidal silica possesses chain structure.

7. The thermally sensitive recording medium of claim 6, wherein the acrylic polymer further comprises acrylonitrile as a monomer component.

8. The thermally sensitive recording medium of claim 6 or claim 7, wherein the acrylic polymer further comprises styrene as a monomer component.

9. A thermally sensitive recording medium comprising a thermally sensitive color developing layer containing colorless or pale colored basic leuco dye and a color developing agent as main components on a substrate, wherein said thermally sensitive recording layer is comprising an acrylic polymer obtained by copolymerization of alkyl acrylate, alkyl methacrylate and vinylsilane as monomer components and a colloidal silica possessing chain structure, wherein said colloidal silica possessing chain structure is consisting of spherical colloidal silica particles of average particle size 10-50nm and metal oxide containing silica which bond said spherical colloidal silica particles, and  $D1/D2$ , which is the ratio of particle size  $D1$  nm measured by dynamic light scattering method and average particle size of spherical colloidal silica  $D2$  nm measured by nitrogen absorbing method, is 3 or more, wherein said  $D1$  is 50-500nm and said spherical colloidal silica particles are linked in one plane like a rosary.

10. The thermally sensitive recording medium of claim 9, wherein said acrylic polymer further contains acrylonitrile.

11. The thermally sensitive recording medium of claim 9 or claim 10, wherein the acrylic polymer further contains styrene as a monomer component.